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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup> :</b> <b>C12N 15/62, C07K 16/28, 16/46</b>	<b>A1</b>	<b>(11) International Publication Number:</b> <b>WO 98/23761</b> <b>(43) International Publication Date:</b> 4 June 1998 (04.06.98)
<b>(21) International Application Number:</b> PCT/US97/19041 <b>(22) International Filing Date:</b> 20 October 1997 (20.10.97) <b>(30) Priority Data:</b> 08/757,205 27 November 1996 (27.11.96) US <b>(71) Applicant:</b> GENENTECH, INC. [US/US]; 1 DNA Way, South San Francisco, CA 94080-4990 (US). <b>(72) Inventors:</b> JARDIEU, Paula, M.; 1896 Pacific Avenue #104, San Francisco, CA 94109 (US). PRESTA, Leonard, G.; 1900 Gough Street #206, San Francisco, CA 94109 (US). <b>(74) Agents:</b> LEE, Wendy, M. et al.; Genentech, Inc., 1 DNA Way, South San Francisco, CA 94080-4990 (US).		<b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>
<b>(54) Title:</b> HUMANIZED ANTI-CD11a ANTIBODIES		
<b>(57) Abstract</b>  Humanized anti-CD11a antibodies and various uses therefor are disclosed. The humanized anti-CD11a antibody may bind specifically to human CD11a I-domain, have an IC50(nM) value of no more than about 1nM for preventing adhesion of Jurkat cells to normal human epidermal keratinocytes expressing ICAM-1, and/or an IC50(nM) value of no more than about 1nM in the mixed lymphocyte response assay.		

# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 97/19041

A. CLASSIFICATION F SUBJECT MATTER  
IPC 6 C12N15/62 C07K16/28 C07K16/46

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	J. HILDRETH ET AL.: "A human lymphocyte-associated antigen involved in cell-mediated lympholysis." EUROPEAN JOURNAL OF IMMUNOLOGY, vol. 13, no. 3, March 1983, WEINHEIM, GERMANY, pages 202-208, XP002054055 cited in the application see the whole document --- -/-	1-25

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
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- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

30 January 1998

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20/02/1998

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/19041

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
A	<p>C. EDWARDS ET AL.: "Identification of amino acids in the CD11a I-domain -- important for binding of the leukocyte function-associated antigen (LFA-1) to intercellular adhesion molecule-1 (ICAM-1)."</p> <p>THE JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 270, no. 21, 26 May 1995, BALTIMORE, MD, USA, pages 12635-12640, XP002054056 see abstract see figure 1</p>	1-25
A	<p>WO 96 32478 A (GENENTECH, INC.) 17 October 1996 see claims</p>	1-25
A	<p>EP 0 440 351 A (MERCK &amp; CO. INC.) 7 August 1991 see claims</p>	1-25
A	<p>P. CARTER ET AL.: "Humanization of an anti-p185HER2 antibody for human cancer therapy."</p> <p>PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE USA, vol. 89, no. 10, May 1992, WASHINGTON, DC, USA, pages 4285-4289, XP000275844 cited in the application see the whole document</p>	1-25
P,X	<p>W. WERTHER ET AL.: "Humanization of an anti-lymphocyte function-associated antigen (LFA-1) monoclonal antibody and reengineering of the humanized antibody for binding to rhesus LFA-1."</p> <p>THE JOURNAL OF IMMUNOLOGY, vol. 157, no. 11, 1 December 1996, BALTIMORE, MD, USA, pages 4986-4995, XP002054057 see the whole document</p>	1-25

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 97/19041

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9632478 A	17-10-96	AU 5435996 A	30-10-96
EP 440351 A	07-08-91	AU 635996 B	08-04-93
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